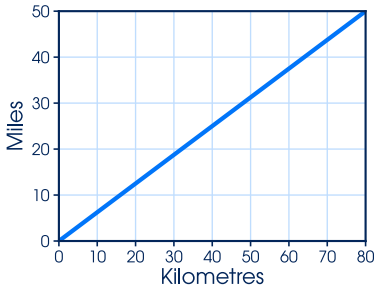
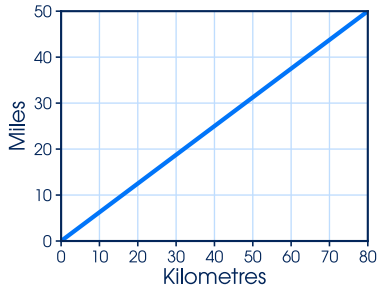
GCSE HIGHER · REVISION MAT 2

Real-life graphs

1 Use the graph to convert 40 km to miles.



2 Use the graph to convert 30 miles to km.



3 The km–miles graph only goes up to 80 km.

Explain how to use it to convert 100 miles to km.

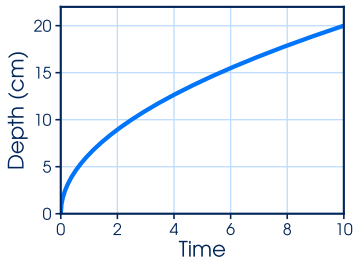
4 Tariff A: £12 plus 20p per unit.

Tariff B: 30p per unit.

For how many units do they cost the same?

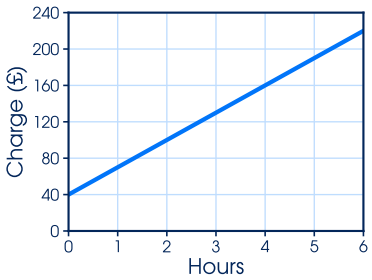
Which is cheaper for 200 units?

5 Water is poured into a container at a constant rate.



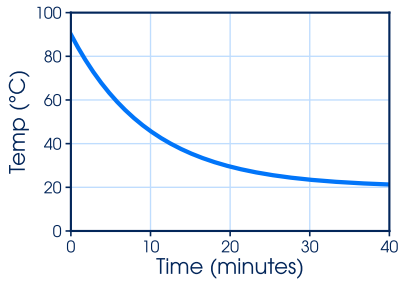
Describe the shape of the container.

6 The graph shows a plumber's charges.



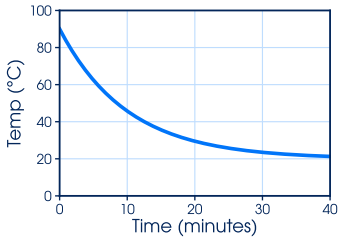
Find the hourly rate and the cost of a 3.5 hour job.

7 The graph shows a cup of tea cooling.



Explain how the graph shows the tea cools fastest at the start.

8 Draw a tangent to estimate the rate of cooling at 10 minutes.



Mr&Mrs MATHS

ANSWERS · REVISION MAT 2

Real-life graphs

1 **25 miles**

2 **48 km**

3 50 miles = 80 km

100 miles = 2 × 80 = 160 km

4 $12 + 0.2u = 0.3u \Rightarrow u = 120$

200 units: A £52, B £60

120 units; A is cheaper

5 The depth rises quickly, then more slowly.

Narrow at the bottom and wider at the top.

6 Fixed fee £40, gradient $\frac{180}{6} = 30$

£30 per hour; £145

7 **The curve is steepest at the start, so the temperature falls fastest then.**

8 Tangent at (10, 46) has gradient ≈ −2.6

Cooling at about 2.6 °C per minute (accept 2 to 3)

Mr&Mrs MATHS